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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,413	05/07/2002	Stig Bakke	HAMSO21.001APC	9005

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EXAMINER

GAY, JENNIFER HAWKINS

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,413

Applicant(s)

BAKKE, STIG

Examiner

Jennifer H Gay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6 and 11-13 is/are allowed.
- 6) ☒ Claim(s) 16-19 is/are rejected.
- 7) ☒ Claim(s) 1-5, 7-10, 14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. 16.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Objections

1. Claims 16 and 19 are objected to because of the following informalities:
 - Claim 16 is objected to because of the use of the word "infinitely". It is the opinion of the examiner that a directional drilling tool would not be able to change direction in an infinite number of directions; it is believed that no directional drilling tool is precise enough to move the drill bit to any angle, i.e. 29.0000001° would not be possible.
 - In line 9 of claim 19, the second occurrence of "flow rate" should be deleted.Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Walker (US 5,535,835).

Regarding claims 16 and 19: Walker discloses a tool and method for changing the direction of drilling with drilling equipment wherein the tool is configured to change the direction of the drilling in an infinitely variable manner (3:42-47) in response to a change of flow rate in the drilling fluid (1:60-2:11, 5:22-38). An increase in the flow rate of the drilling fluid causes a piston to move thus resulting in the tool changing directing. Once the desired new direction is reached, the operator would inherently reduce the flow rate

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of the drilling fluid to allow the piston to retract. If the flow rate of the drilling fluid were not reduced, the tool would continue to change direction.

Regarding claim 17: The tool further includes a means (14) for changing the direction of the tool in an infinitely variable manner. *The examiner notes that if the tool is capable of changing the direction in an infinitely variable manner than it must include a means for doing so.*

Regarding claim 18: The tool further includes a means for controlling the speed of rotation of the tool (16).

4. Claims 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Dorel (US 6,158,529).

Regarding claims 16 and 19: Dorel discloses a tool and method for changing the direction of drilling with drilling equipment wherein the tool is configured to change the direction of the drilling in an infinitely variable manner (3:19-26, 8:20-39) in response to a change of flow rate in the drilling fluid (8:40-9:11). The means for changing the direction of the tool is an electrical control unit and mud motor that moves the tool in response to mud pulses in the drilling fluid. Mud pulses are the result of a sudden change in flow rate of drilling fluid thus the tool changes direction in response to the change of flow rate in the drilling fluid. Further, once the mud pulse has passed, i.e. the increased flow rate plug, the control unit will sense that the flow rate of the drilling fluid has decreased thus halt the change of direction of the tool.

Regarding claim 17: The tool further includes a means for changing the direction of the tool in an infinitely variable manner. *The examiner notes that if the tool is capable of changing the direction in an infinitely variable manner than it must include a means for doing so.*

Regarding claim 18: The tool further includes a means for controlling the speed of rotation of the tool (36).

Allowable Subject Matter

5. Claims 6 and 11-13 are allowed.

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6. Claims 1-5, 7-10, 14, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H Gay whose telephone number is (703) 308-2881. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (703) 308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jennifer Gay
Patent Examiner
Art Unit 3672

JHG 
April 26, 2004